

INTERNATIONAL SEARCH REPORT

national Application No
PCT/JP2004/016792

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H01L29/739 H01L29/78 H01L29/423

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	PATENT ABSTRACTS OF JAPAN vol. 1998, no. 02, 30 January 1998 (1998-01-30) -& JP 09 260650 A (FUJI ELECTRIC CO LTD), 3 October 1997 (1997-10-03) abstract; figures 2,4	1-4, 7
A	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 05, 14 September 2000 (2000-09-14) & JP 2000 058823 A (TOSHIBA CORP), 25 February 2000 (2000-02-25) abstract	1-7
A	US 6 060 747 A (OKUMURA ET AL) 9 May 2000 (2000-05-09) the whole document	1-7

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the International filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the International filing date but later than the priority date claimed

- *T* later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- * & * document member of the same patent family

Date of the actual completion of the International search

21 February 2005

Date of mailing of the International search report

01/03/2005

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax (+31-70) 340-3016

Authorized officer

Baillet, B

INTERNATIONAL SEARCH REPORT

International Application No.

PCT/JP2004/016792

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>PATENT ABSTRACTS OF JAPAN vol. 1997, no. 03, 31 March 1997 (1997-03-31) & JP 08 316479 A (MITSUBISHI ELECTRIC CORP), 29 November 1996 (1996-11-29) cited in the application abstract</p> <p>-----</p>	1-7

INTERNATIONAL SEARCH REPORT

information on patent family members

International Application No
PCT/JP2004/016792

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
JP 09260650	A	03-10-1997	NONE	
JP 2000058823	A	25-02-2000	NONE	
US 6060747	A	09-05-2000	JP 3329707 B2 JP 11111976 A US 6354825 B1	30-09-2002 23-04-1999 12-03-2002
JP 08316479	A	29-11-1996	JP 3288218 B2 EP 0795911 A2 KR 218873 B1 US 6221721 B1 US 6040599 A DE 69629069 D1 DE 69629069 T2 EP 0732749 A2 KR 199271 B1 US 6768168 B1 US 5751024 A US 6001678 A	04-06-2002 17-09-1997 01-09-1999 24-04-2001 21-03-2000 21-08-2003 15-04-2004 18-09-1996 01-07-1999 27-07-2004 12-05-1998 14-12-1999